



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,479	06/07/2001	Eiji Yamada	70820-55991	8919

21874 7590 12/05/2003
EDWARDS & ANGELL, LLP
P.O. BOX 9169
BOSTON, MA 02209

EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
----------	--------------

2652

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,479

Applicant(s)

YAMADA, EIJI

Examiner

Peter Vincent M Agustin

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/07/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2000-171597, filed on 06/08/2000.

Specification

2. The disclosure is objected to because of the following informalities:
Page 64, line 2: change "a optical" to --an optical--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 7-14 rejected under 35 U.S.C. 102(e) as being anticipated by Saimi et al. (US-6430137).

Saimi et al. disclose an aberration detection device and optical information recording and reproducing apparatus, i.e. the "optical pickup device" of claim 1 and the "aberration detecting unit" of claim 14, which "optical pickup device" comprises "light source", "light-concentrating optical system" and "optical element means for splitting the light beam" (figure 20, figure 1, and column 5, lines 1-14), "light-receiving means for

receiving a split light beam” and “aberration signal generating means” (column 11, lines 27-48), and which “aberration detecting unit” comprises “light-concentrating optical system” and “optical element means” (column 5, lines 1-14), “light-receiving means” and “aberration signal generating means” (column 11, lines 27-48).

Column 13, lines 48-62 disclose “focal shift signal generating means” (claim 2).

Column 13, line 65 thru column 14, line 16 and figures 6, 9 and 12 disclose “along a first straight line that is perpendicular to the optical axis of the light beam and serves as a boundary and guiding the first light beam to the light-receiving means”, “comprises third and fourth regions”, “provided approximately linearly symmetrical with respect to an axis of symmetry” and “arranged in positions located apart from the optical axis” of claim 3. Column 5, lines 52-54 disclose “using a difference between electric signals” of claim 3.

Column 13, line 65 thru column 14, line 16 and figures 6, 9 and 12 disclose “along a second straight line perpendicular to the optical axis of the light beam and serves as a boundary and guiding the second light beam to the light-receiving means”, “comprises first and second regions”, “provided approximately linearly symmetrical with respect to an axis of symmetry” and “located at a distance from the optical axis of the second light beam, the distance being shorter than a distance of the third region and the fourth region from the optical axis” of claim 4. Column 5, lines 52-54 disclose “using a difference between electric signals” of claim 4.

Column 13, line 64 discloses a formula similar in form to the “focal shift signal” expression $(S1 - S2) + (S3 - S4) \times K$ of claim 5.

Figures 6, 9 and 12 disclose “the first straight line and the first light beam are identical to the second straight line and the second light beam” (claim 7), “the first region and the second region of the light-receiving means are each formed in a semicircular shape whose chord coincides with the axis of symmetry” and “the third region and the fourth region of the light-receiving means are formed in semicircular annular shapes whose internal circumferences have radii greater than the radii of outermost circumferences of the first region and the second region and arranged outside the outermost circumferences of the first region and the second region” (claim 8), and “the third region, the first region, the second region and the fourth region of the light-receiving means are each formed in a rectangular shape and arranged parallel in this order in a direction perpendicular to the axis of symmetry” (claim 9).

Column 5, lines 1-14 disclose “an object lens of a combination of a plurality of lenses” (claim 10).

Column 18, line 40 thru column 19, line 8 disclose “spherical aberration correcting means” (claim 11) and “correcting the focal shift” (claim 12).

The last line of the abstract discloses driving an aberration correction element in “real-time”, which inherently implies “periodically driving the spherical aberration correcting means” and “correcting the spherical aberration of the light-concentrating optical system based on the spherical aberration detected by an aberration detecting means during driving” (claim 13).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Saimi et al. as applied to claim 4 above, and further in view of Sasaki et al. (US-5623465).

Saimi et al. in the aberration detection art disclose all the claimed features as noted in the 102 rejection above, except for the claimed "storage means" and "focal shift signal generating means" (claim 6).

Sasaki et al. in the optical disk art disclose hold registers (see column 5, line 58 thru column 6 line 23 and figure 4) for storing error signals, i.e., the "storage means" of claim 6, and a multiplexer (see figure 4) for generating an error signal read from the signal surface, i.e., the "focal shift signal generating means" of claim 6, in order to provide retrieving previously saved error signals in the event of and to overcome the negative effect of disc defects which cause out of servo states (note column 5, line 58 thru column 6, line 2).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to provide the "storage means" and "focal shift signal generating means" of Sasaki et al. to Saimi et al. in order to provide retrieving previously saved error signals in the event of and to overcome the negative effect of disc defects which cause out of servo states.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshida (US-6498330) discloses a spherical aberration detector and optical pickup device, which spherical aberration detector includes photodetectors for forming light-gathering spots from light beams, and which optical pickup device is capable of correcting detected spherical aberration.

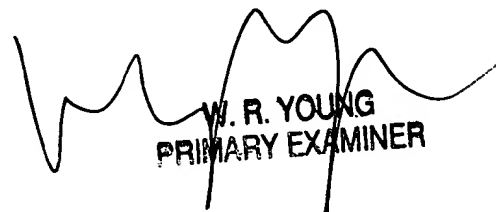
Sakai (US-6339562) discloses an optical pickup device that compensates for errors caused by a focus error signal, which focus error signal is determined by the sub light receiving sections shown in figure 1.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent M Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Peter Vincent Agustin
11/24/2003


W. R. YOUNG
PRIMARY EXAMINER